A Bi-Polar Theory of Nominal and Clause Structure

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It is argued that the basic structure of nominals and clauses is bi-polar—consisting of a referential pole and a relational pole. The locus of the referential pole is the specifier. The locus of the relational pole is the *head*. For nominals, a determiner functioning as an object specifier is the typical referential pole. The determiner functions to ground the nominal in a situation model (Kintsch. 1998). For clauses. an auxiliary verb functioning as a predicate specifier is the typical referential pole which grounds the clause in the situation model. For nominals, a noun functioning as the head is the typical relational pole (albeit a non-relation). However, some relations may also head nominals ("kick" in "the kick"). The reason a relation can head a nominal is because the object specifier determines the referential type of the expression, not the head. The object specifier coerces the relation, causing it to be viewed objectively. For clauses, a main verb functioning as the head (or predicate) is the typical relational pole. However, most adjectives ("he is sad"), prepositions ("he is out"), indefinite nominals ("he is a man") and some adverbs ("he is there") can also function as heads of clauses. Again, the predicate specifier determines the referential type of the clause, not the head. The referential and relational poles may be combined in a single lexical item. For nominals, pronouns, proper nouns, demonstratives and some quantifiers may combine the referential and relational poles. For clauses, tensed verbs combine the two poles. The words which occur between the specifier and the head are typically attracted to one pole or the other. Modifiers are usually attracted to the relational pole where they combine with the head. Referential Modifiers which encode referential meaning may also be attracted to the referential pole. For clauses, the negative particle tends to combine with the referential pole as is suggested by the clitic forms "isn't", "didn't", and "hasn't" and the requirement for do-insertion ("he does not run" vs. "he runs"). Adverbial modifiers tend to combine with the relational pole. For nominals, ordinal quantifiers tend to combine with the referential pole, whereas cardinal quantifiers tend to combine with the relational pole ("the ← first ten → books"). Adverbs, which typically function to modify relations, usually combine with a relational modifier and not the head in nominals ("very" combines with "old" in "very old man").

The bi-polar structure of nominals and clauses does not consider *complements* which are an element of relational meaning. The combination of a relational head with its complements interacts with the encoding of referential meaning in interesting ways. In nominals, the complements of relational heads ("kick" in "the kick") are suppressed by the referential function of the object specifier. Expression of the complements requires introduction of relational

modifiers ("of the ball" and "by the man" in "the kicking of the ball by the man"). In tensed clauses, the complements are expressed normally, but in non-finite clauses, expression of the subject *argument* (argument and complement are used synonymously) is suppressed, and in passive clauses, the subject argument is expressed, but corresponds to the object in the active construction, with the subject argument of the active construction being left unexpressed.

The bi-polar theory resolves problems that have plagued uni-polar theories like X-Bar Theory (Chomsky, 1970) and Dependency Grammar (Hudson, 2000). The shift to functional "heads" in X-Bar Theory leads McCawley to lament "...all sorts of things...get represented as heads of things they aren't heads of" (in Cheng and Sybesma, 1998). For example, in "the dog" treating "the" as the head of a DP taking the NP complement "dog"—when "dog" by itself isn't even an NP. Likewise, Hudson's strongly endocentric version of dependency grammar leads him to suggest that "the" is a pronoun that just happens to take a complement.

The bi-polar theory outlined above is called **Double R Theory** (Referential and Relational Theory). Double R Theory is focused on the grammatical encoding and integration of referential and relational meaning within the broader scope of Cognitive Linguistics (Langacker 1987, 1991; Talmy 2000; Lakoff, 1987). Adding a specifier as the locus of referential meaning is an extension of Langacker's (1991) conception of nominals and clauses with the specifier functioning as the locus of Langacker's *grounding predication*. Details of Double R Theory are available at www.DoubleRTheory.com.

Cheng, L, and Sybesma, R. (1998). Interview with James McCawley, University of Chicago. *Glot International* 3:5, May 1998.

Chomsky, N. (1970). "Remarks on Nominalization." In R. Jacobs & P. Rosembaum, eds., *Readings in English Transformational Grammar*. Ginn. Waltham, MA.

Hudson, R. (2000). "Grammar without functional categories." In R. Borsley ed, *The Nature and Function of Syntactic Categories*. New York: Adademic Press.

Kintsch, W. (1998). Comprehension, a Paradigm for Cognition. NY: Cambridge University Press

Lakoff, G. (1987). *Women, Fire and Dangerous Things*. Chicago: The University of Chicago Press.

Langacker, R. (1987). Foundations of Cognitive Grammar, Volume 1, Theoretical Prerequisites. Stanford, CA: Stanford University Press.

Langacker, R. (1991). Foundations of Cognitive Grammar, Volume 2, Descriptive Application. Stanford, CA: Stanford University Press.

Talmy, L. (2000). Toward a Cognitive Semantics, Vols I and II. Cambridge, MA: The MIT Press